Exhibit No.:	
Issue(s):	Rate of Return (ROR)/ Capital Structure
Witness/Type of Exhibit:	Murray/Rebuttal
Sponsoring Party:	Public Counsel
Case No.:	WR-2022-0303

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2022-0303

** _____ **

Denotes Confidential and Highly Confidential Information that has been redacted

January 18, 2023

PUBLIC

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

MISSOURI AMERICAN WATER COMPANY

FILE NO. WR-2022-0303

Q. What is your name and business address?

A. My name is David Murray and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same David Murray who filed direct testimony in this case?

A. Yes.

Q. What it the purpose of your testimony?

A. I will respond to the direct testimonies of Missouri American Water Company's ("MAWC") witnesses, Anne L. Bulkley and James S. Merante. I will also respond to Randall T. Jennings' rate of return ("ROR") direct testimony, sponsored on behalf of Staff.

Q. What issues does Ms. Bulkley address in her direct testimony?

A. Ms. Bulkley sponsors MAWC's return on common equity ("ROE") recommendation and the reasonableness and appropriateness of Mr. Merante's capital structure recommendation.

Q. What issues does Mr. Merante address in his direct testimony?

A. Mr. Merante addresses MAWC's requested ratemaking capital structure and the cost of debt applied to the debt ratio in his recommended capital structure.

Q. What issues does Mr. Jennings address in his direct testimony?

A. Mr. Jennings addresses all areas of ROR, which includes his recommended ROE, capital structure and cost of long-term debt.

Q. Can you summarize your recommendation in your direct testimony?

A. Yes. I recommend MAWC's ROR be set based on a 9% authorized ROE applied to a 40.45% common equity ratio and a 4.06% cost of long-term debt applied to the remaining 59.55% of my recommended capital structure. My capital structure recommendation considers the proportion of debt MAWC's parent company, American Water Works Company, Inc. ("American Water") targets for purposes of funding its regulated water utility subsidiaries, including MAWC.

Q. What issue will you address first?

A. Capital structure.

CAPITAL STRUCTURE

Q. What capital structure does MAWC recommend for purposes of setting its allowed ROR?

A. Mr. Merante recommends the Commission adopt his projected estimate of MAWC's capital structure at May 31, 2023. Mr. Merante's proposed capital structure consists of 50.43% common equity and 49.57% long-term debt.

Q. Does Mr. Merante rely on MAWC's projected per books balance sheet for his recommended capital structure?

A. Yes. Mr. Merante's capital structure recommendation is based on his view that MAWC's per books balance sheet fairly represents the amount of leverage, i.e. debt, that MAWC's assets support.

Q. Does Mr. Merante provide a recommendation for MAWC's capital structure as of the ordered test year, the twelve months ending June 30, 2022?

A. No. Mr. Merante's capital structure recommendation is based on his estimate of MAWC's per books capital structure at the future date, May 31, 2023. MAWC proposes the

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Commission use this date for purposes of making discrete adjustments to determine MAWC's revenue requirement in this case.

Q. Did MAWC's workpapers provide information related to MAWC's historical capital structures?

A. Yes. MAWC filed its rate case on July 1, 2022. Therefore, at the time it filed its rate case, it had actual per books capital structure balances through March 31, 2022. Based on the long-term capital balances contained in MAWC's workpapers, MAWC's capital structure consisted of 53.77% common equity and 46.23% long-term debt on March 31, 2022.

Q. Do MAWC's workpapers provide its anticipated capital structure as of the ordered test year, June 30, 2022?

A. Yes. MAWC's workpapers indicate its anticipated capital structure at June 30, 2022, would consist of 50.44% common equity and 49.56% long-term debt, which is essentially the same as Mr. Merante's projected MAWC capital structure at May 31, 2023.

Q. How would it be possible for MAWC to achieve such precise capital structure ratios at the proposed period for discrete adjustments?

A. It is actually relatively easy for American Water to manage MAWC's capital structure to the ratios it desires for ratemaking. This is achieved through the management and classification of capital flows among American Water's family of companies. American Water achieves higher common equity ratios (approximately 50%) at its subsidiaries compared to its consolidated common equity ratio of around 40% by classifying debt capital American Water receives from American Water Capital Corporation ("AWCC") as equity infusions into its subsidiaries. If American Water's subsidiaries received all of the debt issued by AWCC through affiliate loans, then American Water's subsidiaries' average capital structures would approximate American Water's consolidated capital structure. If American Water desires MAWC's balance sheet to show a common equity ratio of 50.44% at May 31, 2023, then it just needs to assess MAWC's per books capital structure balances

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at April 30, 2023 and then reclassify capital accounts in order to achieve the desired ratemaking target by May 31, 2023.

Q. Do MAWC's workpapers demonstrate that this is how it plans to achieve the recommended capital structure ratios it hopes the Commission approves to set MAWC's ROR?

A. Yes. MAWC's workpapers show that its long-term capital structure ratios will consist of 52.9% common equity and 47.1% long-term debt at April 30, 2023. In order to reduce the common equity ratio shown on MAWC's balance sheet, MAWC will execute a $120 million long-term affiliate loan with AWCC.

Q. Do MAWC's projected capital balances provide insight as to the potential use of the $120 million long-term affiliate loan?

A. Yes. Approximately $85 million is debited (*i.e.* reduces) to MAWC's implied short-term debt balance. However, because MAWC's implied short-term debt balance is only around $2 million at April 30, 2023, this transaction causes a negative $83 million balance for MAWC's short-term debt. MAWC's short-term debt account is simply an internal balancing account, which allows for reclassification of capital to achieve targeted ratemaking capital structures.

Q. Could this internal bookkeeping impact other ratemaking formulas which assume usual and customary financing practices for an independent company?

A. Yes. The allowance for funds used during construction ("AFUDC") formula for determining the allowed capitalization charges for financing costs supporting construction work in progress ("CWIP") logically applies 100% weighting to short-term debt costs since short-term debt typically funds construction before it is completed. Because American Water's accounting entries simply reclassify short-term debt from AWCC to long-term debt or equity, this inflates allowed financing charges for CWIP. The only means to rectify this consequence is for the Commission to order all of MAWC's CWIP to be capitalized based on short-term debt costs.

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Q. Does American Water memorialize its internal capital structure strategies in an internal procedure?

A. Yes. I attached American Water's internal procedure as Schedule DM-D-13 to my direct testimony. However, for convenience and emphasis, the most pertinent part of this policy is recited as follows:

** _____
_____
_____
_____ **

Q. Why does it appear that American Water is managing MAWC's capital structure to a little over 50% as compared to the 52.74% MAWC requested in the 2020 rate case?

A. Because this equity ratio is consistent with American Water's view of the equity ratio underlying the settlement in MAWC's 2020 rate case, Case No. WR-2020-0344.[1]

Q. Has the Commission independently identified a capital structure it ** _____ ** for MAWC?

A. No.

Q. If the Commission set MAWC's common equity ratio at 50.43%, are you aware of any benefit MAWC ratepayers would receive in return for paying for this higher-cost capital structure as compared American Water's more cost efficient capital structure of around 40% common equity?

A. No.

Q. Does MAWC have any third-party debt outstanding on its balance sheet?

A. Yes. MAWC still has $23.5 million of third-party debt outstanding that it issued in the 1990s. It also recently borrowed approximately $10.7 million from the Missouri

[1] American Water's Investor Presentation, "2022 Third Quarter Earnings & 2023 Outlook Conference Call," November 1, 2022, p. 37.

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Department of Natural Resources through Drinking Water Revenue Bonds ("State Revolving Fund"). All of the other debt outstanding on MAWC's books represent affiliate notes MAWC issued to American Water's financing subsidiary, American Water Capital Corporation ("AWCC").

Q. What percentage of MAWC's capital structure is supported by third-party debt?

A. Approximately 1.5% of MAWC's total capital structure as of June 30, 2022.

Q. How did MAWC raise the other ~98.5% of capital in its capital structure?

A. Approximately 14.1% is from retained earnings ($313.3 million/$2.225 billion) with the remaining proportion from affiliate financing transactions – either affiliate loans from AWCC or paid in capital (*i.e.* equity infusions) from American Water.

Q. Does MAWC have a formal agreement with AWCC that governs the terms and conditions of the financing proceeds it receives from AWCC?

A. Yes. MAWC executed a Financial Services Agreement ("FSA") with AWCC on June 20, 2000.[2]

Q. What was the objective of this FSA?

A. As stated in Paragraph 13 of Missouri-American's application filed in Case No. WF-2002-1096:

> Applicant [MAWC] proposes to implement some or all of the long-term debt portion of its financing program primarily through an affiliate, American Water Capital Corp. ("AWCC"). AWCC is a wholly-owned subsidiary of American Water Works Company, Inc., ("AWW") established for the purpose of providing financial services to AWW and its water and wastewater utility subsidiaries (including Applicant) by pooling the financing requirements of such companies (the "Participants"), thereby creating larger and more cost efficient debt issues at more attractive interest rates and lower transaction costs than would otherwise be available.

[2] Appendix 2 attached to MAWC's Application in Case No. WF-2002-1096.

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The Application goes on further to state in Paragraph 14:

> In the past, Applicant, and its constituent predecessors in interest, provided for debt financing needs primarily through short-term bank borrowings and the sale by private placement of long-term bonds issued pursuant to mortgages on plant and property in this State including the Indenture of Mortgage and, when available, tax exempt bond issues. Changes in financial markets and federal securities regulation have made the public securities market an attractive alternative to the traditional, secured, privately placed bonds and bank borrowings upon which Applicant has traditionally relied. However, borrowers can derive the benefits of the public market only if the amounts they borrow are large enough, and their credit rating high enough, to meet that market's significant entry level requirements. Standing alone, Applicant does not have the borrowing requirements large enough to finance in the public markets. However, by financing through AWCC, Applicant and its sister companies in other states have sufficient borrowing power to finance in the public market and thereby obtain the advantageous terms available therein.

The Application goes on further to state in Paragraph 14:

> Generally, each year the Participants provide AWCC with an estimate of the borrowing requirements which they propose to finance through AWCC for the coming year and for one (1) to three (3) years in advance. On the basis of this information, AWCC arranges borrowing commitments and programs to provide the funds necessary to meet these requirements. All long term debt incurred by AWCC and the corresponding long-term indebtedness of each Participant will be match-funded. That is to say, AWCC borrows long term funds only to meet specific borrowing needs of one or more participants.

Q. Is MAWC restricted from issuing third-party debt pursuant to the FSA it has with AWCC?

A. No. The "Non-exclusivity" clause states the following:

> Nothing in this Agreement prohibits or restricts the Company from borrowing from third parties, or obtaining services described in this Agreement from third parties, whenever and on whatever terms it deems appropriate.

Q. Does MAWC anticipate issuing any traditional independent corporate debt, as it had prior to its execution of the FSA?

A. No. MAWC has not issued any traditional third-party corporate debt since at least 2002, and Mr. Merante's projected capital structure information does not show MAWC issuing its own third-party corporate debt at least through May 31, 2023.

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Q. Mr. Merante and Mr. Svindland testify that MAWC should be viewed as an independent company, both from an operational and financial perspective. Is MAWC an independent company from a financial perspective?

A. No. Attached as Schedules DR-R-1 and DM-R-2 are *** [redacted]

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[redacted]

***

Q. Mr. Merante claims that MAWC has achieved 37 basis points in interest cost savings due to MAWC's borrowing from AWCC rather than issuing its own bonds directly to third-party investors.[3] What is the basis for Mr. Merante's estimated interest savings?

A. Mr. Merante compares yields for "NAIC-1" private placement bond yields and "A" rated utility bond yields.

Q. What does an "NAIC-1" private placement bond represent?

A. Apparently it represents a rating the National Association of Insurance Commissioners ("NAIC") considers in determining allowable investments for insurance companies. An NAIC-1 rating captures bonds rated A-/A3 and above. An NAIC-2 rating captures bonds rated BBB/Baa.

Q. Do you have access to NAIC-1 and NAIC-2 bond yield data?

A. No.

Q. What rating is assigned to AWCC's bonds?

A. Moody's assigns AWCC bonds a 'Baa1' rating.[4] S&P assigns AWCC bonds an 'A' rating.[5]

[3] Merante Direct, p. 14, ln. 14, p. 15, ln. 2.
[4] Moody's Investor Service, Credit Opinion, American Water Works Company, Inc., November 4, 2021.
[5] S&P Global Ratings, American Water Works Co. Inc., July 25, 2022.

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Q. What rating did S&P and Moody's assign MAWC as shown in Schedules DM-R-1 and DM-R-2?

A. *** _____ _____ ***

Q. In your opinion, what rating would be assigned to MAWC debt if it issued first mortgage bonds?

A. *** _____ ***

Q. Are these ratings of higher quality than the ratings assigned to AWCC's bonds?

A. *** _____ _____***

Q. What is the basis for your estimate of MAWC's potential first mortgage bond ratings?

A. Secured ratings for other Missouri utility companies' third-party bond issuances. It is fairly standard for Moody's to assigns first mortgage bonds ratings that are two notches higher than a company's unsecured rating. S&P assigns Ameren Missouri's first mortgage bonds a two-notch higher rating, but a lesser 1-notch higher rating for Spire Missouri and Evergy Metro and Evergy Missouri West

Q. Did Mr. Merante compare MAWC's potential Moody's secured credit rating and S&P's potential secured credit rating to the unsecured Moody's 'Baa1' and S&P unsecured 'A' rating assigned to AWCC's bond issuances?

A. No.

Q. Did you?

A. No. I do not have sufficient access to this more refined market data.

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Q. Did Mr. Merante analyze secured bonds for purpose of his estimate of MAWC's cost of long-term debt if it directly accessed third-party debt markets?

A. No.

Q. Do investment banks typically perform this analysis if an issuer is evaluating whether to issue secured or unsecured debt?

A. Yes. Evergy Metro and Evergy MO West received this information from investment banks bidding to underwrite their bonds.[6]

Q. Has MAWC provided any similar analysis from investment banks?

A. No.

Q. What was the embedded cost of long-term debt for Missouri's other major utilities in their recent rate cases?

A. The embedded cost of long-term debt was 3.91% for Ameren Missouri at June 30, 2022 in Case No. ER-2022-0337; Spire Missouri had an embedded cost of long-term debt of 4.005% at June 30, 2022 in Case No. GR-2022-0179; Evergy Metro had an embedded cost of long-term debt of 3.92% at December 31, 2021 in Case No. ER-2022-0129; and Evergy Missouri West had an embedded cost of long-term debt of 3.96% at December 31, 2021 in Case No. ER-2022-0130.

Q. What embedded cost of long-term debt is assigned to MAWC?

A. 4.50%.

Q. Why did you not include The Empire District Electric Company's embedded cost of long-term debt in your comparison?

A. Because it has a similar affiliate financing arrangement as MAWC, in which it executes affiliate loan agreements from its financing affiliate, Liberty Utilities Finance Company

[6] Case Nos. EF-2022-0103 and EF-2018-0314.

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("LUF"). Therefore, the cost of this debt is also based on the assignment of specific affiliate loans rather than a market cost of all debt issued by LUF.

Q. What percentage of MAWC's planned debt issuances through its proposed future test year of May 31, 2023, are third-party debt issuances?

A. 0%. MAWC's plans to execute an additional $120 million in affiliate notes with AWCC on May 15, 2023.[7]

Q. Are there any financial covenants in MAWC's debt agreements that require it to maintain less financial risk than its parent company, American Water?

A. I am not aware of any. The only financial covenant I am aware of in MAWC's Indenture of Mortgage for bonds issued in the 1990s is that MAWC's indebtedness shall not exceed 65% of its total capitalization.[8]

Q. Do MAWC's workpapers provide information about projected equity infusions into MAWC?

A. Yes. American Water plans to contribute $170 million of equity in MAWC for the period June 30, 2022 through May 31, 2023.

Q. Has American Water issued new common equity to fund its equity infusions into its subsidiaries?

A. No. Although American Water has received minor amounts of equity proceeds from its employees through stock incentive plans as well as dividend reinvestment plans (~$279.4 million since 2010), American Water receives most of its capital by means of loans from AWCC.

[7] Exhibit 22 of MAWC's workpapers.
[8] MAWC Application in Case No. WF-2002-359.

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Q. Do you know the amount of debt American Water had outstanding to AWCC as of June 30, 2022?

A. Yes. According to MAWC's response to Staff DR No. 40.1, American Water has $3.3 billion in loans outstanding to AWCC as of June 30, 2022, which is approximately 29% of AWCC's total outstanding debt.

Q. How much equity has American Water infused into MAWC since 2010?

A. $564 million.

Q. Does American Water plan to issue new equity anytime in the future to reduce the proportion of debt in its capital structure?

A. Yes. American Water has communicated to investors that it plans to issue approximately $2 billion of new equity over the current five-year plan (2022 – 2026), with at least $1 billion issued next year.

Q. If American Water has not issued equity to finance its equity infusions in its subsidiaries, such as MAWC, how does it fund its equity infusions?

A. By inter-company borrowings from AWCC.

Q. Considering American Water borrows from AWCC for purposes of funding its equity infusions in its subsidiaries, are these financing transactions an abuse of MAWC's affiliation with its parent company?

A. Yes. American Water's embedded cost of debt on a stand-alone basis was 3.78% as of June 30, 2022. American Water used the proceeds from these debt issuances to purchase equity in MAWC. If American Water's MAWC subsidiary is authorized an ROE of 9% based on a 50.43% equity ratio compared to the 40.45% it actually has invested, this would allow American Water to earn a 5.22% margin over its cost. After considering the tax deduction American Water takes for the interest expense at the holding company, it generates a margin of 8.19% ((9.00*1.33) – 3.78) for its equity investors.

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Q. How much additional revenue requirement would this generate for American Water's shareholders?

A. Based on Staff's recommended rate base of $2.08 billion, if American Water is allowed to charge MAWC for a cost of capital higher than its cost of borrowed funds, then this generates an additional $18.5 million/year for shareholders through a higher revenue requirement.

Q. Do MAWC and its sister subsidiaries borrow from the same pool of funds that American Water borrows from?

A. Yes. In fact, in certain circumstances, they receive loans from the same debt issuance. If the debt is loaned to MAWC, then MAWC is charged based on the underlying cost of the debt. However, if the debt is loaned to American Water and infused as equity into MAWC, then MAWC is charged an equity return, as I already described.

Q. Are there any other issues you can identify that show the problems with accepting the cost of debt assigned to MAWC?

A. Yes. American Water's internal affiliate loan assignment process systematically assigns shorter-tenor loans to American Water as compared to its operating subsidiary companies. Because shorter-tenor loans typically are cheaper than longer-tenor loans, this causes American Water to have a lower embedded cost of long-term debt of 3.78% based on a weighted-average maturity of 10.11 years. In contrast, MAWC's embedded cost of long-term debt is 4.47% based on a weighted-average maturity of 17.46 years. Further, AWCC's embedded cost of long-term debt is 4.02% based on a weighted-average maturity of 15.11 years.

Because AWCC's embedded cost of debt is a function of all third-party debt issuances, and its weighted-average maturity is managed to achieve a cost-efficient cost of debt capital, this cost should be combined with MAWC's outstanding debt from the 1990s, to determine the allowed debt cost for MAWC. This forms the basis for my 4.06% recommended cost of debt in my direct testimony.

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Q. What do all of these internal accounting and debt assignments demonstrate as it relates to an appropriate capital structure and cost of debt?

A. The only true market-tested and objective capital structure and capital costs are those based on American Water's third-party market transactions. The weighted-average maturity of AWCC's bonds are the most consequential as it relates to American Water's management of its capital costs and its refinancing risks. American Water's consolidated debt ratio (currently approximately 60%) reflects the amount of debt capacity generated by American Water's regulated utility subsidiaries, which includes MAWC.

Q. What aspects of MAWC's recommended capital structure does Ms. Bulkley address?

A. Ms. Bulkley's testimony primarily focuses on her opinion that MAWC's requested common equity ratio of 50.43% is reasonable because she finds it is within the range of the equity ratios of the operating companies owned by the publicly-traded holding companies in her proxy group. Consistent with her comparison of MAWC's proposed common equity ratio to other operating companies' capital structures, it is her position that it is inappropriate to use American Water's capital structure for purposes of determining MAWC's authorized ROR because MAWC needs to be evaluated based on the "stand-alone" principle.[9] Ms. Bulkley testifies that an assessment of MAWC's capital structure should be based on the "operations and risk factors of MAWC as an independent entity, unrelated to the capital structures of its financing sources [American Water and AWCC]."[10]

Q. What is Ms. Bulkley's rationale for comparing MAWC's requested capital structure to the operating companies of the publicly-traded holding/parent companies of her proxy group?

A. Ms. Bulkley testifies as follows:

> …consistent with the determination of ROE, which is based on the expected return for a proxy group of companies that are comparable in risk to MAWC it is important to consider the financial risk of the

[9] Bulkley Direct, p. 11, lns. 1-2.
[10] Bulkley Direct, p. 73, lns. 3-5.

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> **operating companies of the proxy group.** The equity ratio is a measure of the financial risk of the company, and the authorized ROE is the return to compensate investors for that risk. If the Commission is going to rely on the ROE estimates for the proxy companies to establish the authorized ROE for MAWC, it is important that the financial risk of MAWC be similar to the financial risk of the proxy group. (emphasis added).[11]

Q. Did Ms. Bulkley perform a cost of equity analysis on the publicly-traded parent companies of the operating companies or on the operating companies themselves?

A. The publicly-traded parent companies.

Q. Why?

A. Because the operating companies are not publicly-traded. In fact, in some cases, the operating companies are not even separate subsidiary corporations, but rather operating divisions.

Q. Following Ms. Bulkley's logic that the ROE estimates from the proxy group should be consistent with the financial risk of the proxy group, is she consistent when she applies her publicly-traded parent company cost of equity estimates to less leveraged operating companies' capital structures?

A. No. Ms. Bulkley violates her own expressed matching principle. The stock price of each of Ms. Bulkley's proxy companies reflects the risk profile of the consolidated entity, which includes the consolidated business risk of all of its investments as well as the consolidated financial risk (i.e. consolidated debt ratio) supporting these investments, which includes all subsidiary debt and holding company debt. Therefore, while I disagree with Ms. Bulkley's cost of equity estimates, I do agree with her principle that the COE should be matched to the consolidated capital structure of the proxy company. This principle supports my position of setting MAWC's authorized capital structure consistent with that of its publicly-traded parent company, American Water.

[11] *Id.,* p. 73, lns. 5-12.

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Q. What is the range of common equity ratios for the water utility companies in Ms. Bulkley's proxy group?

A. 39.02% to 53.59% with short-term debt included and 40.46% to 55.15% with short-term debt excluded (see Schedule DM-R-3).

Q. Does your recommended common equity ratio for MAWC fall within this range?

A. Yes. I recommended a common equity ratio of 40.45% in my direct testimony.

Q. Based on the information you have reviewed, do you believe there is a more reasonable proxy for MAWC's authorized capital structure other than that of American Water's on a consolidated basis?

A. No. MAWC has not provided any sound and objective evidence to prove that it cannot issue debt independently at a lower cost than it is charged by AWCC. As I demonstrated, if MAWC did issue its own secured general corporate debt, it would be rated two to three notches higher than the cost of the AWCC debt assigned to MAWC. In fact, as I discussed earlier in my rebuttal testimony, other large Missouri utilities have an embedded cost of long-term that is below 4%, but MAWC's internally-assigned debt has a cost of 4.5%.

The more consequential issue for MAWC's ratepayers is the fact that American Water is managing MAWC's capital structure for ratemaking purposes rather than for purposes of achieving a lower-cost of capital. The only market-tested, objectively quantified capital structure that fully captures the amount of debt capacity allowed by MAWC's business-risk, is that of American Water's on a consolidated basis.

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REBUTTAL OF MS. BULKLEY'S ROE TESTIMONY

SUMMARY:

Q. What is Ms. Bulkley's recommended allowed ROE for MAWC?

A. Ms. Bulkley recommends the Commission allow MAWC an ROE of 10.50% based on her view that a range of 9.90% to 11.25% is fair and reasonable.[12]

Q. What is the premise underlying Ms. Bulkley's recommended allowed ROE?

A. Ms. Bulkley estimates MAWC's cost of equity ("COE") to be in the range of 9.90% to 11.25% based on her application of three primary COE methodologies: (1) the constant-growth discounted cash flow ("DCF") method, (2) a standard Capital Asset Pricing Model ("CAPM"), and (3) an empirical CAPM ("ECAPM").

Q. Do you and Ms. Bulkley agree on some fundamental issues in this case?

A. Yes. We both agree that long-term interest rates started increasing in early 2022, and in the past this typically would have caused utility stock valuations to decline. I agree with Ms. Bulkley that if utility valuations declined in response to higher long-term interest rates, then this would imply that on a relative basis, utilities' cost of equity should be higher.

Q. Where do you diverge with Ms. Bulkley in your interpretation of market conditions and how they should be considered in assessing a fair and reasonable authorized ROE?

A. Ms. Bulkley relies heavily on market prognostications rather than analyzing and interpreting current market conditions. In my couple of decades of performing cost of capital analysis, I am not aware of anyone consistently providing accurate and reliable market predictions. Based on Ms. Bulkley's testimonies since at least 2020, she has been predicting a decline in utility valuation levels. She initially reasoned that this would occur because low long-term interest rates were not sustainable. I remember company witnesses

[12] Bulkley Direct, p. 7, ln. 13 – p. 8, ln. 1.

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testifying at the start of the last decade that long-term rates could not remain low for long. Of course, a decade later, they declined to levels that hadn't been experienced for at least 50 years. This gradual decline caused utility valuation ratios to reach all-time highs as recently as February 2020. Of course, in 2022 long-term yields finally did increase, but utility valuation levels did not plummet as Ms. Bulkley's prognostications predicted. This has been perplexing to some, but not necessarily to those that have studied the history of other periods similar to the current period.

PROXY GROUP:

Q. Does Ms. Bulkley include companies other than water utility companies in her proxy group?

A. Yes. Ms. Bulkley includes one electric utility company (Eversource Energy), five natural gas distribution utility companies (Atmos Energy Corporation, New Jersey Resources Corporation, Northwest Natural Gas Company, ONE Gas Inc. and Spire Inc.) and two combination gas and electric utilities (Essential Utilities Inc. and NiSource Inc.) in her proxy group.

Q. Does Ms. Bulkley's inclusion of these other companies in her proxy group cause an additional upward bias in her recommended ROE?

A. Yes, specifically as it relates to her CAPM estimates using Value Line betas. Ms. Bulkley's CAPM results are the primary COE indications supporting her 10.5% ROE recommendation. Her mean high constant-growth DCF COE estimates are higher than 10.5%, but her DCF COE estimates rely on irrational growth assumptions so they do not support a 10.5% ROE. The average Value Line beta for Ms. Bulkley's water utility companies compared to the other non-water companies are 0.73 and 0.87, respectively. The bias is not nearly as consequential for the average Bloomberg betas. Ms. Bulkley's water utility companies and non-water utility companies have Bloomberg betas of 0.76 and 0.79, respectively. Ms. Bulkley's average of her proxy group company's Value Line betas over the last nine years indicate a beta of 0.73 for both water and non-water companies.

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Q. Considering Ms. Bulkley's information on betas along with the beta data you provided in your direct testimony, what is a reasonable beta to use in a CAPM analysis?

A. 0.75.

Q. Why did you not include any other utility subsectors in your proxy group other than water utility companies?

A. As I explained in my direct testimony, water utility companies have higher growth expectations over a longer period of time than the regulated electric and natural gas utility subsectors of the utility industry. For example, over the last several years, American Water has consistently had projected 5-year compound annual growth rates ("CAGR") in earnings per share ("EPS") in the high single-digits (7%-10%), with American Water recently narrowing its guidance on long-term CAGR in EPS to between 7% and 9%. The higher growth in quality EPS (cash flows produced from earnings) has also allowed American Water to grow dividends per share ("DPS") at a consistently higher rate than regulated electric and natural gas utility companies. Furthermore, because the water utility industry has higher growth expectations due to significant capital expenditure programs, its dividend yields have typically been lower than that of regulated natural gas and electric utility companies.

Q. Is it helpful to compare and contrast the water utility industry to other subsectors in the utility industry?

A. Yes. Although I did not directly incorporate electric utility or natural gas utility companies into my proxy group for purposes of my direct testimony, I compared electric utility and natural gas utility valuation information to water utility valuation information in order to provide as much insight as possible to determine if MAWC should be authorized an ROE that deviates from those recently authorized for Missouri's electric and natural gas utilities. Based on my analysis in this case and my analysis in the concurrent Ameren Missouri rate case, Case No. ER-2022-0337, MAWC should be authorized a lower ROE than Missouri's electric and natural gas utility companies. I will further support my opinion by comparing

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and contrasting the eight non-water utility companies to the five water utility companies in in Ms. Bulkley's proxy group.

RELEVANCE OF AMERICAN WATER:

Q. Ms. Bulkley maintains that it is inappropriate to analyze American Water to estimate MAWC's COE, capital structure and ultimate cost of capital.[13] Do you agree with Ms. Bulkley?

A. No. MAWC is inextricably linked to its parent company, American Water, due to American Water's financing strategies to achieve a low cost of capital while still maintaining a strong investment-grade credit rating. American Water created a financing subsidiary, American Water Capital Corporation ("AWCC"), in 2000 in order to consolidate all of its debt financing (both long-term and short-term) at one company. In fact, other than MAWC issuing an occasional bond through the State of Missouri's Energy and Environmental Improvement Energy Resource Authority ("EIERA"), such as MAWC's recent $10.7 million loan from the Missouri Department of Natural Resources, MAWC has relied on American Water entirely for its access to debt and equity. At June 30, 2022, approximately 3% of the long-term debt recorded on MAWC's balance sheet represented third-party debt. The rest are affiliate loans from AWCC.

While the consolidation of American Water's financing needs at AWCC has allowed for economies of scale (larger debt issuances that can be more widely marketed to investors), it has also created a disconnect between MAWC's internally managed capital structure and its cost of capital. The debt investors purchasing the AWCC bonds determine the price they are willing to pay based on American Water's capital structure and business risks. This fact should not be ignored when estimating a fair and reasonable allowed ROR for MAWC. Although the debt loaned to MAWC from AWCC is typically based on the cost of the underlying arms-length transaction, the same is not true as it relates to American Water's equity infusions into MAWC. In this case, MAWC is requesting the Commission allow American Water a margin of 6.72% over American Water's cost of funds as of June

[13] Bulkley Direct, p. 11, lns. 13-23.

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30, 2022 (10.5% - 3.78%). The margin over American Water's cost of debt has expanded by 22 basis points since MAWC's last rate case because American Water's stand-alone cost of debt has declined from 3.94% to 3.78% since December 31, 2019, the test year in Case No. WR-2020-0344.

If American Water managed its consolidated capital structure to a proportion of debt similar to that it assigns MAWC, then its financial risk would be much lower. This would allow AWCC to issue debt at a lower cost, and therefore, the cost of debt assigned to MAWC would be lower. In this situation, although it would be reasonable to charge MAWC for the higher common equity ratio in American Water's capital structure, the cost of the equity would be slightly lower because of the reduced financial risk to equity investors. MAWC ratepayers would benefit from paying for this more equity-rich capital structure because American Water would have a stronger financial risk-profile, allowing for more financial flexibility and a lower cost of debt, especially during uncertain periods such as were experienced at the onset of the Covid-19 pandemic.

American Water's cost of equity is based on the collective business risks of its various subsidiaries, which includes MAWC, as well as the financial risk it incurs at the consolidated level. Because American Water's business operations are predominately regulated water and wastewater utilities, its capital structure and cost of equity are appropriate proxies for estimating MAWC's cost of capital.

Q. Ms. Bulkley maintains that it is important for the Commission to authorize MAWC a ROR based on an ROE and capital structure that will allow it to attract capital on a stand-alone basis and within the American Water system.[14] Did Ms. Bulkley compare her recommended ROR for MAWC to American Water's other subsidiaries?

A. No. In response to OPC DR No. 3033, Ms. Bulkley indicated she did not compare MAWC's risk-profile, ROR, or capital structure to American Water's other subsidiaries.

[14] *Id.*

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Q. Based on the factual circumstances caused by American Water's financial management of its subsidiaries, is it reasonable and appropriate to use information related to American Water's cost of capital (both debt and equity) in determining a fair and reasonable allowed ROR for MAWC?

A. Yes. Therefore, this includes estimating American Water's cost of equity, which most directly impacts MAWC's cost of capital.

INTERPRETATION OF MARKET CONDITIONS:

Q. What is Ms. Bulkley's opinion related to consideration of current market conditions as it relates to setting a fair and reasonable authorized ROR?

A. Mr. Bulkley testifies as follows:

> …analysts and regulatory commissions have concluded that current market conditions have affected the results of ROE estimation models. As a result, it is important to consider the effect of these conditions on the ROE estimation models when determining the appropriate range and recommended ROE for a future period. If investors do not expect current market conditions to be sustained in the future, it is possible that the ROE estimation models will not provide an accurate estimate of investors' required return during that period. Therefore, it is important to consider projected market data to estimate the return for that forward-looking period.[15]

Q. Does Ms. Bulkley's opinion violate basic tenets of efficient market prices?

A. Yes. Apparently Ms. Bulkley believes MAWC's ROE should be set based on market prognostications that long-term rates will continue to increase and cause utility stocks to decrease. Ms. Bulkley surmises that if such prognostications materialize, this will cause MAWC's cost of equity to be higher in future periods.

[15] Bulkley Direct, p. 13, lns. 1-9.

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Q. Does Ms. Bulkley's logic immediately prove that her COE estimates are too high?

A. Yes. Because Ms. Bulkley relies on projected market data she claims is more consistent with expected increases in bond yields, she is already admitting that the current COE is lower than her projected COE estimates. Of course, even her COE estimates using current market prices are too high because of irrational inputs. I will discuss those later.

Q. Have long-term interest rates, as measured by the 30-year United States Treasury ("UST") bond, increased subsequent to Ms. Bulkley filing her direct testimony on July 1, 2022?

A. Yes. The 30-year UST bond yield continued to increase, peaking at 4.4% at the end of October 2022, and declining to approximately 3.7% since then.

Q. What is Ms. Bulkley's opinion as to the impact increasing long-term rates should have on a Commission authorized ROE in this case?

A. Ms. Bulkley testifies as follows:

> …interest rates and utility share prices are inversely correlated which means, for example, that an increase in interest rates will result in a decline in the share prices of utilities.[16]

Q. Was Ms. Bulkley's prediction correct for the 2022 calendar year?

A. No. Despite rapidly increasing long-term interest rates through this period, the market-weighted average value for her proxy group's stock prices generally had a positive correlation with increases in long-term bond yields. As I discussed in my direct testimony, this is likely due to the fact that increases in long-term bond yields were due to inflationary concerns and not improved economic conditions. In fact, investors are concerned that the Fed's aggressive monetary policy actions may cause a recession, making defensive sectors, such as the utility industry, more attractive relative to the broader market. See the below

[16] Bulkley Direct, p. 26, lns. 10-12.

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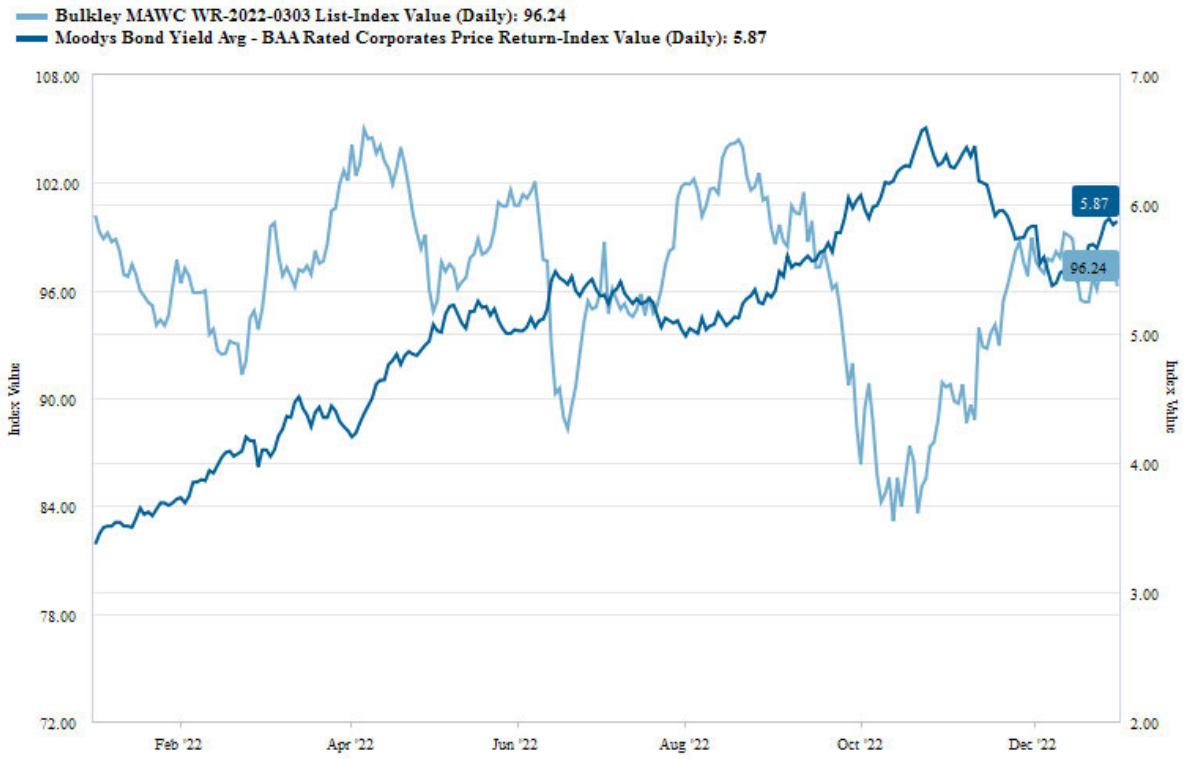
chart showing how Ms. Bulkley's proxy group's stock prices traded relative to Moody's 'Baa' corporate bond yields:



As can be seen, despite long-term Moody's Baa corporate bond yields increasing by 74% through the year, stock prices for Ms. Bulkley's proxy group only declined 3.94%.

Q. How did the increase in Moody's Baa long-term bond yields impact the annual return on these bonds?

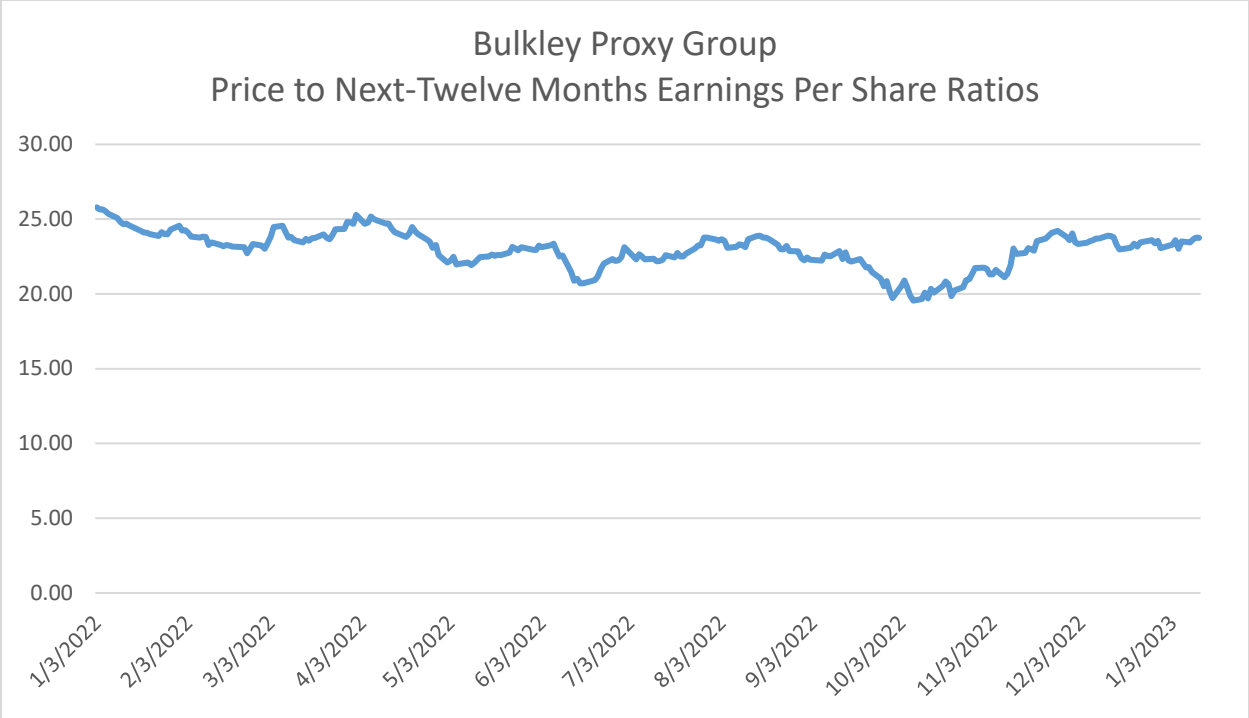
A. I do not have access to this data. However, according to the annual Stocks, Bonds, Bills and Inflation data for 2022, the increase in long-term rates caused the annual total return on long-term UST Bonds to be negative 26.08% (-28.47% price decline and 2.61% from income/coupons).

Q. Is it more relevant to evaluate price-to-earnings ("P/E") ratios rather than just stock prices?

A. Yes. If prices increase at the same rate as earnings growth, then this implies that the utility industry's COE is stable throughout the period. If the P/E ratio increases and growth is stable, then factors other than earnings growth are likely at play, such as a change in investors' required returns due to macro factors, such as economic cycles and/or changes in opportunity costs.

Q. What were the P/E ratios for Ms. Bulkley's proxy group during 2022?

A. The P/E ratios for Ms. Bulkley's proxy group for the 2022 calendar year are as follows:



As can be seen, Ms. Bulkley's proxy group's P/E ratio started the year a little over 25x, then finished the year a little under 25x.

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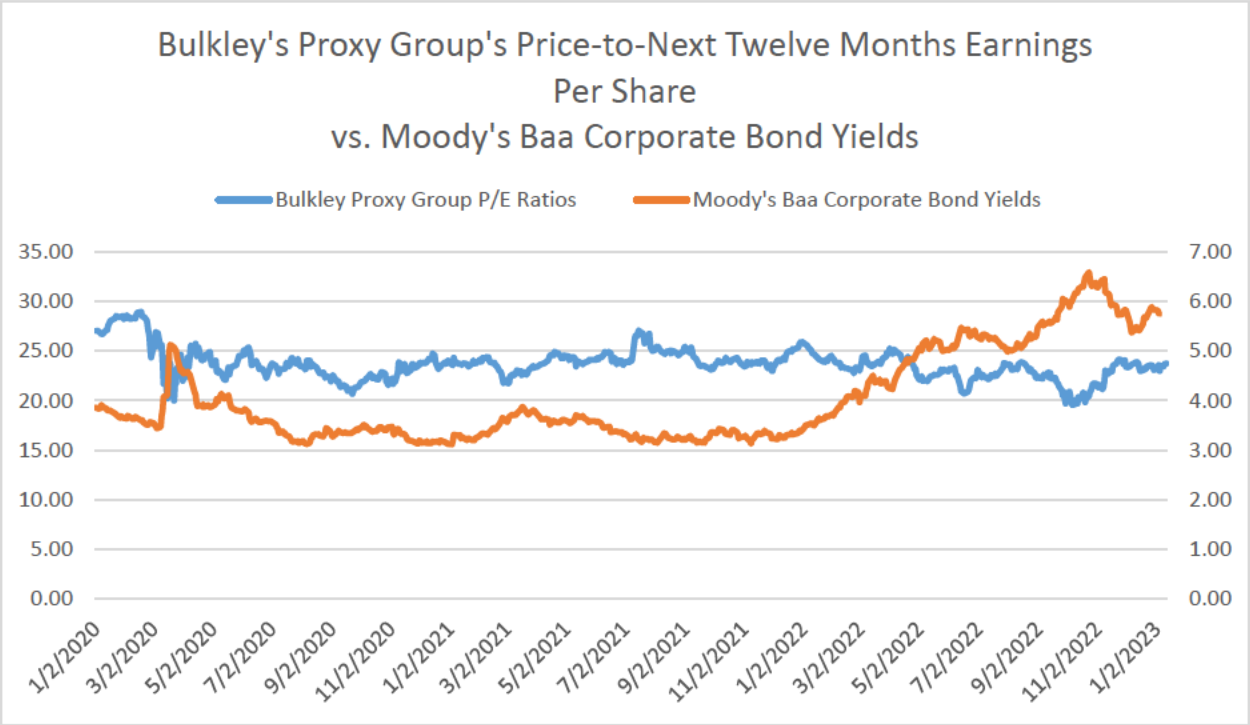
Q. What P/E ratios did Ms. Bulkley's proxy group trade at when bond yields hit all-time lows later in 2020 and into 2021?

A. The following chart shows Ms. Bulkley's proxy group's P/E ratios compared to Moody's Baa corporate bond yields since 2020:



Q. Considering utility P/E ratios remained higher despite higher long-term interest rates, what does this indicate about investors' required risk premiums to invest in utility stocks?

A. They have declined.

Q. Can you compare the P/E ratios of Ms. Bulkley's water utility companies to the non-water utility companies in her proxy group?

A. Yes.

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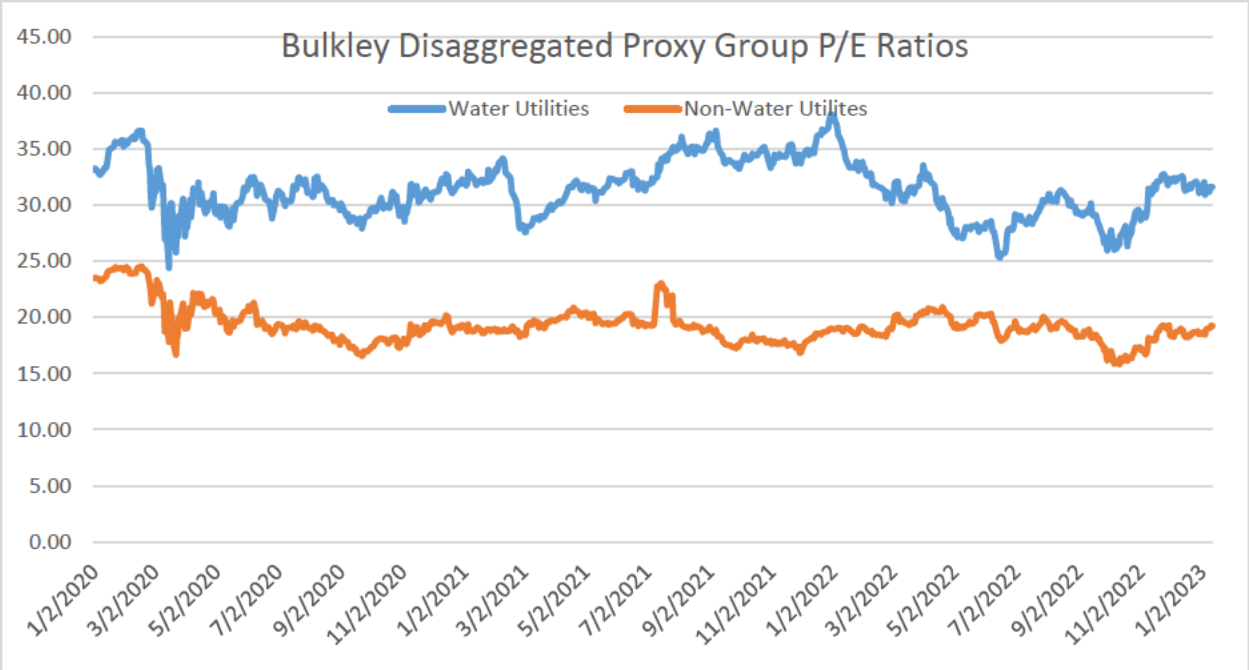

As can be seen, the water utility companies in Ms. Bulkley's proxy group have regularly traded at a premium of at least 10x P/E (50% higher) than the non-water utility companies in Ms. Bulkley's proxy group. There are two primary reasons to explain the water utility industry's higher P/E ratios. First, investors expected higher growth in EPS for water utility companies as compared to the other subsectors. Second, investors require a lower return (i.e. lower COE) on their stock investment to invest in water utilities. Based on the logic underlying Ms. Bulkley's constant-growth DCF COE estimates, the primary cause would be a lower COE. Ms. Bulkley's constant-growth DCF analysis assumes investors' expected growth over an infinite holding period is consistent with the projected 5-year CAGR in EPS. According to Ms. Bulkley's constant-growth DCF COE estimates, investors in water stocks expect constant annual capital gains of 6.55% to 6.7% per year, whereas investors in the non-water companies expect constant annual capital gains of 6.19%. On a P/E to long-term growth basis, this causes the water industry to be trading at PEG (price-to-earnings/long-term growth) ratios of approximately 4.73x (31x/6.55) compared to 3.07x (19x/6.19%). Of course, as I explained and supported in my direct testimony, although I think the higher P/E ratios can be partly attributed to a lower COE for the water utility subsector, much can also be attributed to the long runway (multiple

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decades) of higher projected CAGR in EPS as compared to the electric and gas utility subsectors.

Q. On pages 12 through 31 of her direct testimony, Ms. Bulkley provides her view on how the Commission should consider the impact of market conditions when setting MAWC's allowed ROR. What is your reaction to her testimony?

A. Ms. Bulkley reasons that because MAWC's rates will be in effect for the next 3 to 4 years and because she expects long-term interest rates to continue to increase, it is important to set the authorized ROE higher based on her view that utility stocks will deflate as interest rates continued to increase.

Ms. Bulkley and I have stark differences in opinion about the role of a ROR witness. ROR witnesses should provide their opinion about the current cost of capital and then a fair and reasonable ROR based on current market conditions. Apparently, Ms. Bulkley believes the role of a ROR witness is to provide their opinion about potential future market conditions and then recommend a ROR based on these prognostications. Considering that many ROR witnesses' *current* COE estimates typically differ by up to 500 basis points (6% versus 11%) it is incredulous to suggest that ROR witnesses should debate projected future market conditions, let alone current conditions.

Q. Does a current cost of capital already reflect investors' expectation of future market conditions?

A. Yes. This explains the current inverted yield curve (short-term interest rates are higher than long-term interest rates). Long-term yields are basically investors' expectations of an average of short-term returns rolled over during the entire tenor of a long-term yield. Of course, investors will require a certain risk premium for the potential that short-term rates may average less or more than the long-term average, but the point is that no investor buys or sells a long-term bond with perfect information. If the market knew with certainty that long-term bond yield will increase, then there would be no buyers of current long-term bonds, causing an immediate increase to long-term bond yields.

Q. Is Ms. Bulkley correct that using current utility stock prices in the constant-growth DCF analysis results in an underestimated cost of equity?

A. No.

Q. If her opinion that investors expect utility stock prices to decline were correct, would the traditionally-applied constant-growth DCF analysis cause an overestimation of the COE?

A. Yes. Ms. Bulkley claims that utility stock prices will decline because long-term bond yields are expected to continue to increase. If Ms. Bulkley's opinion is correct, then investors buying utility stocks are factoring in a contraction in P/E ratios. Ms. Bulkley's constant-growth DCF does not consider this expected contraction.

Q. Is there a means to adjust the constant-growth DCF method to account for Ms. Bulkley's anticipated changes to utilities' P/E ratios?

A. Yes. The constant-growth model can be extended to include expected changes in the P/E ratio. This version of the constant-growth DCF is referred to as the "Grinold- Kroner" model.[17] It is expressed algebraically as:

$$k = D_1/P_0 + g + \Delta PE$$

Where:
k = the cost of equity;
D_1 = the expected next 12 months dividend;
P_0 = the current price of the stock;
g = the dividend growth rate; and
ΔPE = the per period change in the P/E multiple

Q. If Ms. Bulkley had used this derivative of the constant-growth DCF method to estimate the cost of common equity, how would this impact her cost of equity estimates?

A. They would be lower.

[17] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 35.

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TAX CUT AND JOBS ACT:

Q. Do you think the Commission needs to consider the Tax Cut and Jobs Act ("TCJA") of 2017 when setting MAWC's allowed ROE?

A. No. Regulators and utility companies have already addressed issues related to the TCJA. Besides, American Water has actually been more aggressive with its use of debt since the passage of the TCJA, while still increasing its dividend by 10%/year since 2018. If American Water was concerned about the impacts of the TCJA on its cash flows, it would have initiated more conservative financial policies, such as issuing common equity and/or slowing the growth of its dividend to increase the equity ratio in its consolidated capital structure. Instead, American Water has actually become more aggressive as demonstrated by its more leveraged capital structure.

DISCOUNTED CASH FLOW ASSUMPTIONS:

Q. Although Ms. Bulkley dismisses her DCF estimates for purposes of her recommended ROE, do you agree with the assumptions Ms. Bulkley used in her DCF analysis?

A. No. Ms. Bulkley argues that her constant-growth DCF results under-estimate the water utility industry's COE because she does not believe current higher stock prices are sustainable. As I indicated previously, this is incorrect. However, even without an adjustment for changes in P/E ratios, her DCF analysis overestimates the COE. Ms. Bulkley's DCF analysis assumes her proxy groups' DPS can grow in perpetuity at the same rate as equity analysts' consensus projected 5-year CAGR in EPS. This is not how equity analysts determine fair prices to pay for utility stocks.

CAPM ASSUMPTIONS:

Q. Why are Ms. Bulkley's CAPM cost of equity estimates so high?

A. Because she uses irrational expected market returns. Ms. Bulkley estimates a total compound annual market return for the S&P 500 of 12.74% for the foreseeable future

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(perpetually based on her use of a constant-growth DCF to estimate S&P 500 returns). Subtracting long-term risk-free rates from Ms. Bulkley's estimated market return results in her equity risk premium estimates of 9.34% to 10.02%.[18] Therefore, Ms. Bulkley's expected equity risk premiums are approximately double the equity risk premiums used by utility equity analysts to determine a fair price to pay for utility stocks.

Q. How is Ms. Bulkley able to achieve such high equity risk premium estimates?

A. Because she assumes that the S&P 500 can grow its earnings at a compound annual rate of 10.92% in perpetuity.

Q. Are you aware of any authoritative sources, academic or actual investors, that use Ms. Bulkley's approach for estimating market returns?

A. No. I know of no authoritative source that suggests this is a rational or reasonable approach for purposes of estimating market returns. In fact, I know of several authoritative sources that recommend against using a growth rate higher than GDP for purposes of determining the expected return for a broad index, such as the S&P 500.

Q. What academic support are you aware of?

A. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program discusses how analysts often use the Gordon growth model (synonymous with the constant growth DCF model used in utility ratemaking) to formulate the long-term expected return for the broader equity markets. In the case of a broad-based equity index, such as the S&P 500, it is reasonable to estimate the long-term potential capital gains for the index by using estimated nominal GDP over a long-term period. The curriculum specifically provides the following formula for estimating the constant growth rate with an explanation that follows:

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is

[18] Bulkley Direct, Schedule AEB-4.

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> viewed as higher or lower growth than that of the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small.[19]

Combining Ms. Bulkley's S&P 500 dividend yield of 1.73% and projected growth in U.S. nominal GDP of approximately 4.0%, implies a much lower expected long-term return for the S&P 500.

Q. Are you aware of any common valuation metrics that dispute Ms. Bulkley's market growth rate expectations?

A. Yes. A comparison of a broad equity market capitalization amount to that of the total size of the U.S. economy. This valuation metric provides a sanity check on potential growth for capital markets. Warren Buffett made it popular when he provided insight on how high the market, as measured by the Wilshire 5000, became valued as compared to U.S. GDP at the time of the "dot com" bubble around March 2000. At that time, the Wilshire 5000 was around 1.4x that of GDP. As of September 30, 2022, it was around 1.49x.

Q. What would this ratio be in 50 years if the market grew at the 10.92% compound annual growth rate Ms. Bulkley suggests is appropriate?

A. The Wilshire 5000 index would be approximately 37x times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $38.35 trillion as of September 30, 2022, the Wilshire 5000 would have a market capitalization of $6.83 quadrillion in 50 years. U.S. GDP was $25.72 trillion as of the same date. Based on a 4.0% long-term growth rate for the U.S. economy, GDP would be approximately $182.81 trillion in 50 years. It is not rational to assume corporate wealth will become much larger than the economy in which it operates, let alone 37x the size of the economy. This explains why the CFA Program advises not using a perpetual growth rate much, if any, higher than the GDP growth rate of the economy(ies) in which a company operates.

[19] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.

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Q. Why are Ms. Bulkley's ECAPM results higher than her standard CAPM results?

A. The results are higher because Ms. Bulkley's ECAPM gives 25% weight to the unadjusted market risk premium and 75% weight to the utility beta adjusted market risk premium. Being that Ms. Bulkley's utility betas at least reduce her high equity risk premium estimates by 25%, because her ECAPM allows for a 25% weighting to an unadjusted risk premium, this amplifies the bias inherent in Mr. Bulkley's high risk premiums.

Q. Does this mean that the larger the market risk premium estimate, the more widely divergent the ECAPM results will be compared to the standard CAPM?

A. Yes.

Q. Can you provide an example?

A. Yes. Ms. Bulkley assumes a market risk premium of approximately 9.34% to 10.02% compared to more rational estimates used by investors of approximately 6%. If Ms. Bulkley had used a more reasonable market risk premium of 6%, her ECAPM would have only been approximately 28 basis points higher than her standard CAPM. Because Ms. Bulkley uses extremely high market risk premiums, and these market risk premiums received more weight in her ECAPM, this causes her ECAPM results to be approximately 46 basis points higher than her standard CAPM.

ADDITIONAL CONSIDERATION FOR POTENTIAL RATEMAKING MECHANISMS

Q. If the Commission allows MAWC to implement its requested revenue stabilization mechanism ("RSM") and its proposed plant in service accounting tracking, should there be an adjustment to the allowed ROR?

A. Yes. This can be accomplished either of two ways – (1) adjust the equity ratio in the authorized capital structure to recognize the additional debt capacity this implies MAWC would realize if it were a stand-alone entity or (2) lower the allowed ROE by an amount consistent with an improvement in MAWC's assumed credit rating.

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Q. _____

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_____ *** However, in the likely circumstance in which, like American Water, MAWC were to use more leverage, i.e. debt, in its capital structure to offset the reduced business risk, then it would only need to maintain an FFO/debt ratio of 9% to 13% in order to maintain its current SACP of 'A-'. I used the midpoint of this FFO/debt benchmark, or 11% to determine how much additional debt MAWC could have in its capital structure. Using an average of MAWC's 2020 and 2021 FFO of approximately $165 million, this implies MAWC could substitute $440.275 million of long-term debt for common equity and be able to meet an FFO/debt threshold of 11%. This would cause MAWC's capital structure to be comprised of 27.64% common equity and 72.36% long-term debt.

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Q. If MAWC's revenue requirement were set based on this capital structure, would this cause a decline in MAWC's FFO?

A. Yes. This would reduce MAWC's FFO by approximately $37 million. Factoring in a reduction to the FFO with no change in assumed debt would cause an FFO/debt ratio of 9.55%.

Q. What capital structure, if used to set MAWC's authorized ROR, would allow MAWC's FFO/debt ratio to be above the 11% threshold?

A. I determined that MAWC's capital structure could consist of 35% common equity and 65% long-term debt and achieve a pro forma FFO/debt of 11.62%.

Q. Applying your same recommended ROE of 9% to this more leveraged capital structure, what is the resulting ROR?

A. 5.79% as compared to my recommendation of 6.06% if no RSM and plant in service accounting mechanisms are approved. This lower ROR would reduce MAWC's annual revenue requirement by approximately $8.8 million.

STAFF TESTIMONY

Q. Do you have any concerns with Staff's ROR recommendation?

A. Only as it relates to their recommended allowed ROE. Staff recommends using American Water's consolidated capital structure and cost of debt, which is similar to the approach I recommended with a few exceptions.

Q. Who sponsored Staff's ROR recommendation?

A. Randall T. Jennings.

Q. What is Mr. Jennings' recommended allowed ROE?

A. 9.73%, which is the mid-point of his recommended allowed ROE of 9.48% to 9.98%.

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Q. How did Mr. Jennings arrive at his recommended allowed ROE range?

A. Mr. Jennings used the Commission's authorized ROE of 9.37% in the 2021 Spire Missouri rate case, Case No. GR-2021-0108, as his starting point for any adjustments. Mr. Jennings then deducted 10 basis points from this authorized ROE because water utility companies had a 2021 average authorized ROE that was 10 basis points lower than gas utilities. Then Mr. Jennings determined his estimate of the change in the water utility industry's COE for the current period compared to the period related to Spire Missouri's 2021 rate case (1Q 2021).

Q. Do current market conditions support Mr. Jennings' recommendation to award MAWC a higher ROE than that which has been recently authorized for Missouri's large electric and gas utilities?

A. No. While Mr. Jennings assumes the Commission may have authorized MAWC an ROE 10 basis points below that which it authorized Spire Missouri in 2021, he does not perform a market analysis comparing the water utility industry to the natural gas distribution utility industry. Staff estimated a COE of 8.25% for Spire Missouri in its 2022 rate case as compared to its 7.68% COE estimate for MAWC in this rate case. Staff's lower COE estimates for MAWC justifies a lower authorized ROE than that awarded to Spire Missouri.

Q. Is Staff recommending a higher authorized ROE for MAWC in this case than its recommended authorized ROE for Ameren Missouri in its concurrent rate case, Case No. ER-2022-0337?

A. Yes. Staff recommended an authorized ROE of 9.59% in the Ameren Missouri rate case compared to its 9.73% recommended ROE for MAWC.

Q. What was Staff's recommended allowed ROE for MAWC in its 2017 rate case?

A. 8.5% to 9.5% with a point recommended allowed ROE of 9.25%.

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Q. What was the basis for Staff's recommended allowed ROE in the 2017 rate case?

A. Staff based its 9.25% allowed ROE recommendation on its conclusion that the water utility industry has a lower cost of capital than the electric utility industry. Staff noted that the Commission had authorized KCPL an allowed ROE of 9.5% in Case No. ER-2016-0285, and considered it reasonable to authorize MAWC a lower allowed ROE.

Q. Is there supporting evidence from the investment community that at least in general, investors perceive the regulated water industry as less risky than the gas and electric utility subsectors of the utility industry?

A. Yes. I provided much of this corroborating information in my direct testimony in this case.

Q. As it relates to Mr. Jennings' conclusion the water utility industry's COE has increased since early 2021, what is the driving factor for his conclusion?

A. Mr. Jennings' comparative CAPM COE estimates. Based on his CAPM methodology, Mr. Jennings estimates that MAWC's COE has increased by over 100 basis points since early 2021.

Q. What does Mr. Jennings' DCF COE estimates imply about the change in MAWC's COE since early 2021?

A. It has declined by 10 basis points.

Q. How much weight did Mr. Jennings assign to each of his methods for purposes of concluding that MAWC's COE has increased since early 2021?

A. 50%.

Q. Why do Mr. Jennings' CAPM and DCF COE estimates provide contradicting indications for the change in the utility industry's COE?

A. Because the CAPM's foundation variable is a risk-free rate. The CAPM formula is as follows:

$$K_e = Rf + \beta\,(RP_m)$$

Where:
- K_e = the cost of equity for a security;
- Rf = the risk-free rate;
- β = beta; and
- RP_m = equity risk premium.

Mr. Jennings uses an average of the monthly 30-year United States Treasury ("UST") yield (April, May and June of 2022) for the foundational variable to which he adds adjusted risk premiums based on historical relationships between utility equity risk premiums as compared to market risk premiums (*i.e.* the S&P 500). Mr. Jennings estimates MAWC's current CAPM COE at 7.44% based on the average 30-year UST yield of 3.04% for the second quarter of 2022. As it relates to Mr. Jennings' backdated COE estimates for MAWC, he uses a 3-month average of 30-year UST yields for the months of January, February and March of 2021. The average 30-year UST yield for this period was 2.03%. Therefore, the 100 basis point increase in 30-year UST yield is the only variable explaining Mr. Jennings' conclusion from his CAPM that MAWC's COE has increased by 100 basis points.

As I explained extensively in my Direct Testimony, utility stock price behavior over the period since Covid-19 has not been consistent with historical patterns. This renders the CAPM much less reliable than DCF COE estimates that do not rely on interest rates for purposes of estimating the COE. DCF COE estimates directly consider recent utility stock prices in determining a reasonable estimate. The constant growth DCF formula is as follows:

$$k = D_1/P_0 + g$$

Where:
- k = the cost of equity;
- D_1 = the expected next 12 months dividend;
- P_0 = the current price of the stock; and
- g = the dividend growth rate.

Consequently, the fact that utility stock prices have not declined, at least significantly, due to increases in interest rates, is directly captured in DCF COE estimates and should be afforded 100% weight considering recent market conditions.

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Q. If Mr. Jennings had given 100% weight to the DCF analysis he performed to estimate the change in MAWC's COE, how would this have impacted his recommended allowed ROE?

A. It would be 20 basis points lower than Spire Missouri's last authorized ROE of 9.37%, or 9.17%. I subtracted the 10 basis point differential Mr. Jennings determined for water average ROEs and another 10 basis points for the relative decline in his DCF COE estimates.

Q. Did Staff rely on its CAPM analysis in MAWC's 2020 rate case for purposes of estimating a relative change in MAWC's cost of common equity?

A. No.

Q. What is the primary difference between you and Mr. Jennings as it relates to your recommendations?

A. It is my opinion that the Commission should not set MAWC's ROE above levels it authorized for Missouri's other major utility subsectors—electric and natural gas utilities. My analysis shows that the water industry has a lower cost of capital than the electric utility industry. In the 2017 rate case, Staff estimated that the water industry's COE is 25 basis points lower than the electric industry's COE. This implies an allowed ROE of no higher than 9.25% is reasonable in this case.

SUMMARY AND CONCLUSIONS

Q. Can you summarize the main points of your rebuttal testimony?

A. Yes. MAWC's capital structure represents a targeted internal capital structure managed through affiliate financing transactions and bookkeeping entries. Comparing MAWC's assigned cost of long-term debt to the cost of long-term debt at other Missouri utility subsidiaries that issue their own long-term debt proves American Water's affiliate financing transactions do not allow for fair and reasonable debt costs. AWCC's embedded cost of long-term debt is more similar to Missouri's other utilities' costs of debt. Because

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AWCC's embedded cost of long-term debt is a function of all third-party debt, it is the most objective and market-based. For the same reasons, American Water's capital structure should be used for purposes of setting MAWC's ROR.

MAWC should not be authorized an ROE higher than that of Missouri's gas and electric utilities. Consistent with her past testimonies, Ms. Bulkley suggests the Commission should set authorized ROEs based on market prognostications. Almost always, Ms. Bulkley has predicted the utility industry's COE will be higher in future periods. Current market prices reflect investors' expectations of future economic and capital market conditions. As proven by utility stock prices resilience during rising interest rates in 2022, even if interest rates increase, this does not translate into a higher COE for utilities. ROR witnesses should simply report on the current market cost of capital and not make predictions.

Staff is recommending a higher authorized ROE for MAWC as compared to Ameren Missouri. This is not supported by a comparison of P/E ratios of the water utility industry to the electric utility industry. It is also not supported by comments and adjustments made by the investment community. In this instance, it is wise to take a step back from the details of various theories and critically analyze whether certain approaches are consistent with fairly simplistic data points, such as valuation multiples. Water utility valuation ratios imply MAWC has a much lower COE than Missouri's electric and gas utilities (I estimate approximately 100 basis points lower). This information logically justifies authorizing MAWC a lower ROE than that of Missouri's electric and gas utility companies.

Q. Does this conclude your testimony?

A. Yes.

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of	)	
Missouri-American Water Company's	)	
Request for Authority to Implement	)	Case No. WR-2022-0303
General Rate Increase for Water and Sewer	)	
Service Provided in Missouri Service Areas	)	

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David Murray, of lawful age and being first duly sworn, deposes and states:

1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 18th day of January 2023.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.